

**Amendments to the Drawings:**

The attached replacement drawing sheet makes changes to Figs. 57A, 57B and 57C and replace the original sheet with Figs. 57A, 57B and 57C.

Attachment: Replacement Sheet

**REMARKS**

Claims 1-3, 5-43 and 45 are pending. Claims 20-25 and 31-43 have been withdrawn. By this Amendment, Figs. 57A, 57B and 57C are amended, claims 1 and 45 are amended to incorporate the subject matter of canceled claim 4 and to add new features, claims 2, 3, 5-8, 11-22, 24-26, 32, 33, 37, 38 and 42 are amended for form and/or dependency, and claims 4 and 44 are canceled without prejudice or disclaimer. Support for the amendments to claims 1 and 45 can be found at least in Figs. 1A-2B and 5A-9 and the corresponding disclosure in the specification. No new matter is added.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Lee in the January 26, 2009 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

The Office Action objects to the figures. However, as discussed during the personal interview, with respect to Figs. 56A, 56B and 56C, Applicants respectfully submit that the substitute specification was filed with the September 23, 2005 Preliminary Amendment, and therefore this objection was remedied by the substitute specification. Specifically, the September 23, 2005 Preliminary Amendment modified Figs. 56A, 56B and 56C, to 57A, 57B and 56C, respectively. Further, by this Amendment, Applicants amend the Figs. 57A, 57B and 57C responsive to the objection with respect to "RELATED ART" label. Accordingly, Applicants request withdrawal of the objections.

The Office Action rejects claims 1-19, 44 and 45 under 35 U.S.C. §102(b) or, in the alternative, under 35 U.S.C. §103(a) over Johnson (U.S. Patent No. 5,654,566); and rejects claims 26-30 under 35 U.S.C. §103(a) over Johnson and Ohmi et al. (U.S. Patent No. 5,661,421). The rejection of canceled claims 4 and 44 is moot. Applicants respectfully traverse the rejections of the remaining claims.

As discussed during the personal interview, Johnson and Ohmi, either alone or in combination, do not teach or render obvious a first circuit group charging a first terminal, a second circuit group discharging the first terminal, an applying portion applying a weighted mean of a plurality of inputs to one or both of the first circuit group and the second group, and a spin transistor ... being included in one or both of the first circuit group and the second circuit group, as recited in independent claim 1, and similarly recited in independent claim 45.

Johnson merely discloses that a spin injected-FET 100 has a ferromagnetic film F1 (110) at a source S, a ferromagnetic film F2 (116) at a drain D and a gate 122 to be provided with a read voltage pulse 114. See Fig. 4 of Johnson. Therefore, Johnson does not disclose any circuit that charges or discharges a terminal and that has the spin injected-FET 100. Thus, Johnson does not disclose the claimed first circuit group, second circuit group, applying portion and spin transistor recited in independent claim 1, and similarly recited in independent claim 45.

Ohmi does not remedy the above-noted deficiencies of Johnson. Ohmi does not teach or render obvious a first terminal that outputs an operating point, a first circuit group charging the first terminal, a second circuit group discharging the first terminal, an applying portion applying a weighted mean of a plurality of inputs to one or both of the first circuit group and the second group, and a spin transistor having transfer characteristics depending on the spin direction of conduction carriers and being included in one or both of the first circuit group and the second circuit group, and the operating point being changed based on the transfer characteristics, as recited in independent claim 1, and as similarly recited in independent claim 45.

Therefore, for at least these reasons, independent claims 1 and 45 define patentable subject matter. Claims 2, 3, 5-19 and 26-30 depend from independent claim 1, and therefore also define patentable subject matter for at least the reasons discussed above, as well as for


the additional features they recite. Accordingly, Applicants respectfully request withdrawal of the rejections.

Additionally, withdrawn claims 20-25 and 31-40 depend from independent claim 1. Accordingly, upon the allowance of independent claim 1, Applicants respectfully request rejoinder and allowance of withdrawn claims 20-25 and 31-40. Applicants also respectfully request rejoinder and allowance of withdrawn claims 41-43.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:AXS/wma

Attachment:

Replacement Sheet (Figs. 57A-C)

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